DOCUMENT RESUME

ED 397 796 IR 017 984

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TITLE Lifelong Learning for the 21st Century.
PUB DATE 96
NOTE 4p.; In: Proceedings of Selected Research and Development Presentations at the 1996 National Convention of the Association for Educational Communications and Technology (18th, Indianapolis, IN, 1996); see IR 017 960.
PUB TYPE Reports - Descriptive (141) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Computers; Continuing Education; High School Equivalency Programs; *Industrial Training; *Inplant Programs; *Inservice Education; *Job Training; Lifelong Learning; Needs Assessment; Postsecondary Education; Professional Education; *Program Development; Refresher Courses; Remedial Instruction; *Retraining; Technological Advancement

ABSTRACT

The Lifelong Learning Center for the 21st Century was proposed to provide personal renewal and technical training for employees at a major United States automotive manufacturing company when it implemented a new, computer-based Computer Numerical Controlled (CNC) machining, robotics, and high technology facility. The employees needed training for their new job requirements, including operating the equipment, activating and utilizing the computers, analyzing and diagnosing problems, and making timely repairs. Five statewide schools and three consulting firms provided information about their personal renewal and work oriented programs. Learning needs assessment was conducted on all employees via questionnaires, 84% of which were completed. Results of the first year of the lifelong learning program include: 38 employees took courses towards their high school degree or General Equivalency Degree (GED); 118 began pursuing college degrees; 73 enrolled in basic work-oriented remedial courses; over 400 employees completed technically oriented courses; and over 1,000 employees took part in other training programs. Training took place on-site, through teacher-student interaction, television, the televised Indiana Higher Education Telecommunications System (IHETS), computerized independent study, and selected independent study combined with mentoring. Employees enrolled in programs or took courses with Purdue University School of Technology, Indiana Vocational Technology College, Ball State University School of Technology or Business School, and Penn State University (International Correspondence School). (SWC)

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INTRODUCTION

A major United States automotive manufacturing company invested extensively developing a new computer-based, Computer Numerical Controlled (CNC) machining, robotics and high technology facility. The work environment and job content had changed, **BUT** the employees hadn't. They were totally unprepared for the new job requirements regardless of management's communications and worker involvement in organizing and equipping the facility. The employees were not fully competent to operate the equipment, activate and utilize the computers, analyze and diagnose problem causes or make timely repairs. Action was needed...immediately!

THE PLAN

A joint salaried and hourly employee task force formulated a plan to address both the immediate and long-term concerns. Their recommendation was to create an in-plant Lifelong Learning Center for the 21st Century to provide for personal renewal and technical updating of the workforce. Company and union leadership fully endorsed the plan and pledged their continued support. A training/education consultant was hired to assure needed confidentiality which seemed to be a real concern for the hourly employees.

COMMUNICATION

Five statewide schools and three consultant firms provided extensive communications about their respective personal renewal and work oriented programs. The workforce was informed via all-employee meetings, videotapes, written bulletins/announcements, live intra-plant video transmissions, in-plant computer inter-net systems, electronic bulletin boards and union membership meetings. Following this communications blitz, a learning needs assessment and interest questionnaire was developed, communicat-ed, and hand delivered in-plant to all 2,182 employees. The questionnaire was on the inter-net computer system, too, so its completion could be done and transmitted electronically. Each employee was offered a one-on-one confidential meeting if he/she desired. This was especially critical for those lacking reading and/or writing skills.

The 1,831 (84%) questionnaires completed showed 287 employees expressed interest in pursuing either a high school or college degree program. Basic work oriented remedial courses were requested by 179 employees and they all indicated a desire for specialized technical courses, too. A full range of basic through in-depth technical courses were selected by 388 employees while over 1,300 employees selected specific training programs such as interpersonal relations, conflict resolution, listening, problem solving, effective meetings, etcetera.

Follow-up information meetings were held concerning the (1)high school degree, (2) associates degree, (3) bachelors degree, and (4) masters degree programs. Those employees wanting work oriented remedial education were individually counseled and completed a computerized assessment. Help was provided to those needing assistance especially in the reading area.

Training program offerings were consolidated and prioritized according to technological and manufacturing needs. Those critical competencies for the new high-tech facility received top priority to satisfy the immediate needs. A master schedule was developed and employees needing the high technology and computer skills were trained immediately while the remainder of the workforce wanting this training were invited to sign-up for future offerings. A master sign-up time was announced for all the various training programs and courses and the employees responded beyond expectations.

THE BEGINNING

The personal renewal, technical updating Lifelong Learning Center for the 21st Century began and experienced immediate and significant success. During the first year, thirty-eight (38) employees took courses toward their high school degree or GED (General Equivalency Degree). Several of these courses of study were offered via television. Another 118 employees began pursuing various college degrees all within the facility. The teaching methodology utilized was many faceted: the normal teacher-student inter-action, the televised Indiana Higher Education Telecommunications System (IHETS) which broadcast courses from the statewide universities, computerized independent study and selected independent study coupled with mentoring. The college degree based students were about equally divided between associate degrees from Purdue University School of Technology or Indiana Vocational Technology

College, bachelor degrees from Ball State University School of Technology or Business School, and masters degrees from Ball State University or Purdue University in either executive development or engineering, respectively.
All courses other than laboratory or experiential based courses were offered via IHETS, as available, and several courses used inter-active computer based courses for credit through Penn State University (International Correspondence Schools). Seventy-three (73) employees enrolled in work oriented remedial courses such as arithmetic, reading, writing, blueprint reading, measuring and metrics. Much of their training/education was via small group interaction facilitated by a professional instructor, interactive computer systems and video programs. Individualized help was readily available for those needing it. Over 400 employees completed technical oriented courses/programs such as computer applications, Computer Numerical Control (CNC) programming, CNC machine set-up and operation, basic and advanced electronics, mechanics and hydraulics/pneumatics concurrent with machine and robot troubleshooting, diagnosis and repair. Every conceivable method of training and education was utilized from computers, to laser discs, to simulation models, to IHETS etcetera. In addition to these first year accomplishments, over 1,000 employees participated in other training programs many of which utilized CBT, interactive computer systems and IHETS. The first year was a resounding success and the subsequent years have been equally as good. Goodnight - 3